

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Utilities
ExxonMobil Refining and Supply Company
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 2638
Activity Number: PER20070027
Draft Permit 2363-V2**

I. APPLICANT:

Company:
ExxonMobil Refining and Supply Company
P.O. Box 551
Baton Rouge, Louisiana 70821

Facility:
Utilities
4045 Scenic Highway, Baton Rouge, East Baton Rouge Parish, Louisiana
Approximate UTM coordinates are 675.736 kilometers East and 3374.700 kilometers
North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

ExxonMobil Refining and Supply Company (ExxonMobil) owns and operates a petroleum refinery in Baton Rouge, Louisiana (BRRF). The Utilities is an existing facility in the refinery. Currently the facility operated under Permit 2363-V1 dated January 25, 2005.

This permit serves as a renewal/modification for the Utilities (formerly the Water Clarification Unit (WCLA).

Several Part 70 permits addressing portions of the facility have already been issued. These include:

Permit #	Units or Sources	Date Issued
2385-V4	Catalytic Cracking Complex	05/13/2008
2589-V3	Light Ends	04/11/2006
2176-V3	Low Sulfur Gasoline	04/11/2006

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Permit #	Units or Sources	Date Issued
2275-V2	Pipestill Complex	10/10/2005
2447-V1	Hydroprocessing	05/18/2006
2296-V2	Light Oils	08/06/2007
2261-V1	Reformer	02/02/2007
2341-V1	Specialties Complex	08/29/2007
2047-V1	Docks	04/11/2006
2363-V1	Water Clarification Unit (WCLA)	01/25/2007
2795-V3	Refinery Tank Farm	01/11/2007
2696-V0	Complex Labs	08/31/2005
2300-V0	Sulfur Plant	03/20/2006
3060-V0	Hydrofining Unit	01/18/2008

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

ExxonMobil submitted an application and Emission Inventory Questionnaire (EIQ) received December 19, 2007 and additional information dated April 4, 2008 and July 9, 2008 requesting a Part 70 permit modification.

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge. A copy of the notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List. The application and proposed permit were submitted to the East Baton Rouge Parish Library. The proposed permit was also submitted to US EPA Region 6. All comments will be considered prior to the final permit decision.

Project description

Wastewater is collected throughout the refinery (Area Source ID: WCLA-OFFSITES) for processing. The first stage in the WCLA onsite processing is the oil/water separators (Source IDs: WCLA/TK0021 and WCLA/TK0022). These tanks also receive wastewater from the central process sewers via the stormwater diversion facilities (SWDFs) and the wet gas scrubber settling ponds. During heavy rainfall events, water from the SWDFs can be routed to Rain Basins 1 and 2 (RB1/RB-2).

Wastewater from WCLA/TK0021, WCLA/TK0022, the Oily Water Sewer System (OLSS), the 12-inch line, and water from the RB-1 flows through the pre-treatment section of WCLA, which includes aggressive biological treatment. After secondary treatment in BIOX, the water is discharged.

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Equipment included in the Offsites source are: equipment grouped into Offsites (calculating using TOXCHEM Version 3), offsites tanks, heavy liquid fugitives, and secondary wastewater.

The unit also provides several different subsystems that generate or supply BRRF with utility commodities to the manufacturing units at the complex. These commodity utilities consist of air, water, emergency power to complex critical facilities, and fuel for complex vehicles.

There is one project-associated change included with this permit modification:

- Three (3) permanently installed portable air compressors (EIQ #s UTIL/PAC1, UTIL/PAC2, and UTIL/PAC3). These permanently installed PACs serve as backup to the complex instrument air system in the event of a power failure to the complex. These new air compressors will be powered by diesel engines, which will comply the requirements of 40 CFR 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines).

Also, updates to the permit application are included that are not project related. These changes include:

- The addition of nine (9) previously not permitted permanently installed portable air compressors (EIQ #s: UTIL/PAC4, UTIL/PAC5, UTIL/PAC6, UTIL/PAC7, UTIL/PAC8, UTIL/PAC9, UTIL/PAC10, UTIL/PAC11, and UTIL/PAC12).
- EIQ #s UTIL/PAC1, UTIL/PAC2, UTIL/PAC3, UTIL/PAC4, UTIL/PAC5, and UTIL/PAC6 will be subject to the requirements of Subpart IIII.
- The addition of four (4) previously not permitted diesel powered fire water pumps (EIQ #s: FIRE/PUMP DP-5, FIRE/PUMP DP-9, UTIL/PUMP P-6002, and UTIL/PUMP Shore).
- The addition of three (3) previously not permitted diesel powered emergency generators (EIQ #s: FIRE/GEN, SECR/GEN, and UTIL/GEN Shore).
- The addition of two (2) previously not permitted gasoline dispensing facilities (EIQ #s UTIL/GAS-CP and UTIL/GAS-RF).
- The deletion of the WCLA Sludge Dryers (EIQ #s: WCLA/DRYERS A/B).
- The revision of emission limits for WCLA Offsite Tank (EIQ #: WCLA/OFFSITE TANKS) to address changes in emission factors for tank fittings.
- The change of the name from "Water Clarification Unit" to "Utilities" to better define the operational nature of all of the units in the permit.

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- The addition of, or updates to, regulatory requirements for 40 CFR 63 Subpart GGGGG.
- The revision of emissions limits for WCLA Onsite (EIQ WCLA/ONSITES) to address PM emissions from a previously not permitted cooling tower that is included in the WCLA Onsite source.

Permitted Air Emissions

Estimated emissions from the facility in tons per year are as follows:

Pollutant	Before	After	Change	Emission Increases due to Including 19 Existing Sources*	Emission Increases due to Reconciliation
PM ₁₀	—	26.31	+26.31	8.02	+18.29
SO ₂	—	2.40	+2.40	1.89	+0.51
NO _x	—	131.15	+131.15	121.34	+9.81
CO	—	32.39	+32.39	28.31	+4.08
VOC†	479.46	486.33	+6.87	9.25	-2.38

*This permit adds 19 existing sources which were omitted from previous permits.

Prevention of Significant Deterioration Applicability

BRRF is located in an attainment area for carbon monoxide (CO), particulate matter (PM₁₀), sulfur dioxide (SO₂), and hydrogen sulfide (H₂S). Although nitrogen oxides (NO_x) is a nonattainment pollutant, it is analyzed for applicability with both the PSD and NNSR programs. Any net emissions increase in these pollutants must be reviewed with respect to the PSD program.

The proposed projects will result in physical changes in the Utilities Permit. There will be emissions increases of CO, NO_x, PM₁₀, and SO₂. These increases are based on the proposed permitted potential emissions for the three (3) new permanently installed portable air compressors. The resulting increases in emissions will be less than the PSD significant threshold for these criteria pollutants. Therefore, PSD permitting requirements are not triggered.

Criteria Pollutant	PSD Significant Threshold (tpy)	Total Project-Impacted Emissions Increases Only (tpy)
CO	100	4.08
NO _x	40	9.81
PM ₁₀	15	0.54
SO ₂	40	0.51

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Non-Attainment New Source Review (NNSR)

BRRF is located in a marginal non-attainment area under the 8-hour ozone standard. For existing major sources (VOC or NO_x greater than 50 tpy), the marginal classification has a 25 tons per year threshold value for a major modification, and a 25 tons per year trigger for consideration of the new emissions increases of NO_x and/or VOCs.

Criteria Pollutant	NNSR Significant Threshold (tpy)	Total Emissions (tpy)	Project-Impacted Increases Only
NO _x	25		9.81
VOC	25		0.48

As a result of the physical modifications in Utilities due to the proposed project, there will be a VOC emissions increase of 0.48 tons per year and a NO_x emissions increase of 9.81 tons per year. Because each of these increases is less than the 25.0 tons per year NNSR analysis trigger threshold, no further NNSR evaluation for VOCs or NO_x is required.

MACT requirements

These regulations define maximum achievable control technology (MACT) standards for stationary source categories of hazardous air pollutants (HAPs). These HAPs are listed in the Clean Air Act Amendments of 1990.

BRRF is a plant site that is a major source of HAPs because it has the potential to emit, in the aggregate, 10 tons per year or more of any HAP, or 25 tons per year of any combination of HAPs. In this permit 40 CFR 63 Subpart CC (Refinery MACT) and 40 CFR 63 Subpart GGGGG (Site Remediation) apply.

Air Modeling Analysis

Emissions associated with the proposed renewal/modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

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IV. Regulatory Analysis

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms conditions and standards are provided in the Facility Specific Requirements Section of the draft permit.

Prevention of Significant Deterioration Applicability

The proposed projects will result in physical changes in the Utilities Permit. There will be emissions increases of CO, NO_x, PM₁₀, and SO₂. These increases are based on the proposed permitted potential emissions for the three (3) new permanently installed portable air compressors. The resulting increases in emissions will be less than the PSD significant threshold for these criteria pollutants. Therefore, PSD permitting requirements are not triggered.

Non-Attainment New Source Review (NNSR) Part 52

As a result of the physical modifications in Utilities due to the proposed project, there will be a VOC emissions increase of 0.48 tons per year and a NO_x emissions increase of 9.81 tons per year. Because each of these increases is less than the 25.0 tons per year NNSR analysis trigger threshold, no further NNSR evaluation for VOCs or NO_x is required.

New Source Performance Standards (NSPS) – Part 60**Subpart Kb: Volatile Organic Liquid Storage for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984**

The following tanks are subject to the requirements of NSPS Subpart Kb.

WCLA/TK0021
WCLA/TK0022
WCLA/TK0026
WCLA/TK0522
WCLA/TK0523
WCLA/TK0543
WCLA/TK0544

Subpart GGG: Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

Fugitive emissions are subject to NSPS Subpart GGG. The refinery complies via the Louisiana Refinery MACT Determination.

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Subpart IIII: – Standards of Performance for Compression Ignition Internal Combustion Engines

The new permanently installed portable air compressors (EIQ #s UTIL/PAC1, UTIL/PAC2, UTIL/PAC3, UTIL/PAC4, UTIL/PAC5, and UTIL/PAC6) will be subject to the requirements of Subpart IIII. BRRF will install certified engines and operate these engines to the manufacturer's specifications. BRRF will also operate these engines with diesel fuel that meets the sulfur requirements of this subpart.

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories – Part 61

Subpart FF: National Emission Standards for Benzene Waste Operations

The following tanks are subject to the requirements of NESHAP Subpart FF.

WCLA/TK0021
WCLA/TK0022
WCLA/TK0026
WCLA/TK0522
WCLA/TK0523
WCLA/TK0543
WCLA/TK0544

Subpart M: NESHAP for Asbestos – The BRRF site, including Utilities, is subject to the demolition/renovation requirements of this regulation.

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories – Part 63

Subpart CC: Petroleum Refineries (Refinery MACT I)

The following tanks are Group 2 storage vessels under Subpart CC.

UTIL/D100	WCLA/TK0101	WCLA/TK0301B	WCLA/TK0549	WCLA/TK0804
UTIL/D200	WCLA/TK0102	WCLA/TK0302A	WCLA/TK0602	WCLA/TK0808
UTIL/D300	WCLA/TK0103	WCLA/TK0302B	WCLA/TK0603	WCLA/TK0810
UTIL/TK0174	WCLA/TK0104	WCLA/TK0414	WCLA/TK0604	WCLA/TK0807
UTIL/TK0401	WCLA/TK0202A	WCLA/TK0459	WCLA/TK0650	WCLA/TK0809
UTIL/TK0611	WCLA/TK0202B	WCLA/TK0522	WCLA/TK0654	WCLA/TK1211
UTIL/TK0619	WCLA/TK0204	WCLA/TK0546	WCLA/TK0695	WCLA/TK1232
WCLA/TK0072	WCLA/TK0301A	WCLA/TK0548	WCLA/TK0801	

Fugitive emissions are subject to NESHAP Subpart CC and the refinery complies via the Louisiana Refinery MACT Determination. All secondary wastewater streams at the Utilities Complex are Group 2 and are not regulated by Subpart CC.

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Subpart GGGGG: Site Remediation MACT

BRRF is an affected facility for the Site Remediation MACT. Currently, BRRF does not have affected sources subject to the process vent, equipment leak, closed vent system/control device, or continuous monitoring system provisions of the MACT. Remediation Management Units (RMMUs) are used to manage remediation material generated from site remediation associated with unplanned releases. BRRF uses a variety of containers as RMMUs. Existing tanks and/or separators which are potentially subject to the MACT are exempt because they contain remediation material with an average total VOHAP < 500 ppmv.

Containers are currently the only emission source (RMMU) subject to the emission control requirements of the Subpart GGGGG. The HAP emissions associated with these RMMUs will be controlled according to the standards in the MACT or will meet one of the provided exemptions.

Subpart ZZZZ: Reciprocating Internal Combustion Engines (RICE) NESHAP

The firewater pumps (EIQ #s FIRE/PUMP DP-5, UTIL/PUMP P-6002, and UTIL/PUM Shore) and the emergency generators (EIQ #s FIRE/GEN, SECR/GEN, and UTIL/GEN Shore) are defined as emergency stationary RICE. As such, they are not subject to Subpart ZZZZ or the General Provisions (40 CFR 63 Subpart A), except for the requirements to keep the applicability determination for 5 years as per 40 CFR 63.10(b)(3).

Compliance Assurance Monitoring (CAM) – Part 64

Emission units at the Utilities are not equipped with an add-on control device to achieve compliance with an emission limitation or standard. As such, a CAM Plan is not required for Utilities.

40 CFR 68 – Chemical Accident Prevention

The BRRF site complies with the requirements in 40 CFR 68. As required, risk management plans for the site were originally submitted by June 21, 1999 and revisions were submitted by June 21, 2004.

State Operating Permit Program (Title V) – Part 70

This permit is a renewal/modification permit and the application, submitted under the Louisiana Title V permitting program, contains all the elements as required under the Louisiana Title V regulations.

State Regulations

Comprehensive Toxic Air Pollutant Emission Control Program – Chapter 51

The toxic air pollutant emissions from fugitives and secondary wastewater must be controlled to a degree that constitutes MACT. The refinery complies with the Louisiana

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Refinery MACT Determination for fugitive emissions. The secondary wastewater system complies with applicable provisions of NESHAP Subpart FF. The floating roof tanks comply with applicable provisions of NSPS Subpart Kb and NESHAP Subpart CC.

V. Permit Shields

A permit shield was not requested.

VI. Periodic Monitoring

No periodic monitoring is required.

VII. Applicability and Exemptions of Selected Subject Items

See Permit.

VIII. Streamlined Requirements

Unit	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Utilities/FUG	LA Refinery MACT	5% VOTAP (class I and II)	LA Refinery MACT in the manner* agreed to be ExxonMobil in its approved Air Toxic Compliance Plan Approved April 18, 1996, per Source Notice and Agreement dated October 14, 1996.
	LAC 33:III.2122	10% VOC	
	40 CFR 63 Subpart CC - modified HON option	5% VOHAP	
	40 CFR 60 Subpart GGG	10% VOC	

*In lieu of the requirement to monitor connectors (that have been opened or had the seal broken) during the next scheduled monitoring period, connector tightness testing is currently performed prior to equipment startup. Tightness testing may consist of nitrogen pressure test, hydro testing, or high pressure steam. Tightness is verified by instrumentation or observation.

IX. Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel

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cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Hydrogen Disulfide (H₂S) - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant;

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≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.